



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

The American Midland Naturalist

PUBLISHED BI-MONTHLY BY THE UNIVERSITY
OF NOTRE DAME, NOTRE DAME, INDIANA

VOL. V.

JANUARY-MARCH, 1918.

NO. 7, 8.

The Genus *Euthamia* in Missouri.

BY BENJAMIN FRANKLIN BUSH.

Having had occasion last January to examine some specimens collected by Mr. Ralph Hoffman about Kansas City in Jackson County, Missouri, my attention was directed to some specimens of *EUTHAMIA*, which upon a casual inspection might pass for *E. GRAMINIFOLIA* (L.) Nuttall, a species commonly supposed to occur in this locality, but which upon a closer examination seemed to differ from the description of that species in several important particulars.

No other species of *EUTHAMIA* being known for this region, and only one other, *E. LEPTOCEPHALA* (T. & G.) Greene, a low-land species of Arkansas and Louisiana, which extends up the Mississippi Valley to the low, flat, quaternary formation of the southeastern part of the State, it was interesting to note this new accession to the Flora of a region thought to be well covered by a descriptive Manual.

Having in mind always the bare possibility that every strange plant of this region may be an undescribed species, I wrote to Dr. George T. Moore of the Missouri Botanical Garden to kindly loan me volume 5 of Dr. Greene's *Pittonia*, in which *E. GYMNOSPERMOIDES* Greene, a species of the high prairies of Kansas and Nebraska, and most probably the species in hand, was described, and my astonishment may be imagined when I saw that Dr. Greene had established the species on plants collected by me in the Indian Territory in 1894, and that I had left my native county where I had collected for many years, to go down to the Indian Territory to collect this most interesting and distinct *EUTHAMIA*, when it was common on the prairies of the County where I lived.

As none of the writers on *EUTHAMIA*, Britton in Manual in 1905, Fernald in *Rhodora* in 1908, Britton in *Illustrated Flora* in

1913, Small in Flora in 1913, indicate this species for the Indian Territory, the type locality, I had no intimation that it had been collected there, and by myself. Dr. Small does not even mention this species in the first or second edition of his Flora.

Having procured Dr. Greene's fifth volume of *Pittonia*, which I had not seen before, and also *Rhodora*, Volume 10, in which Prof. Fernald has revised the species of *EUTHAMIA* for the New Gray's Manual, I began a careful study of the species found or likely to be found in Missouri, and have studied all the material of these species preserved in the Herbarium of the Missouri Botanical Garden, 9 sheets from the United States National Museum Herbarium, about fifty sheets from the Herbarium of the University of Illinois, that in Mr. Mackenzie's private herbarium in New Jersey, and all that in the Herbarium of the University of Notre Dame, Indiana, for which courtesies I am under obligations to Dr. George T. Moore, Dr. William R. Maxon, Prof. William Trelease, Mr. Kenneth K. Mackenzie and Dr. J. A. Nieuwland, to whom thanks are here returned.

The genus *EUTHAMIA* is abundantly distinct in aspect and characters from *Solidago*, as may be seen from the following diagnosis:

EUTHAMIA NUTTALL, Gen. 2: 162. 1818.

Erect, paniculately branched herbs, perennial by long root-stocks, with linear or linear-lanceolate, entire, or minutely-serrulate, sessile, 1-5 nerved punctate leaves, and very numerous small heads of both tubular and radiate yellow flowers, clustered in the large corymbose, convex or nearly flat-topped inflorescence. Bracts of the involucre obtuse or acutish, or in far western species acute or acuminate, in two sets, the outer 5-14, short, oblong, in about 3 series, the inner 7-14, linear-oblong, in about 3 series, appressed, more or less glutinous or viscid.

Receptacle flattish, fimbriate, or pilose. Ray-flowers pistillate usually more numerous than the disk-flowers, the rays small, scarcely exceeding the involucre. Disk-flowers perfect. Anthers obtuse at the base. Style-branches with linear-lanceolate appendages. Achenes top-shaped or oblong, villous-pubescent.

Differs from *Solidago* chiefly in the fimbriate or pilose receptacle and in having the ray-flowers more numerous than the disk-flowers, *Solidago* having an alveolate receptacle with the disk-flowers more numerous than the ray-flowers.

For the Missouri species of EUTHAMIA, I offer the following somewhat detailed key:

1. Stems simple, branched at the top, 9-15 dm. tall, densely short hairy, especially the upper part, the branchlets, pedicels and broad leaves; leaves thinnish, scarcely or obscurely punctate, distinctly 3-ribbed, often with a pair of indistinct lateral nerves; heads sessile or very short pedicelled in capitate clusters in a rather open convex corymb, 18-28-flowered; involucre ovoid-companulate to subcylindric, 4-5 mm. high, its yellowish bracts oblong to oblong-lanceolate, slightly viscid; achenes oblong, villous-pubescent.

1. EUTHAMIA HIRTELLA.

1. Stems simple, branched at the top, 2.5-5 dm. tall, glabrous, or minutely scabrous, especially the upper part, the branchlets, pedicels and leaves; leaves distinctly 1-nerved, sometimes with a pair of indistinct lateral nerves, or the larger sometimes 3-nerved; heads sessile or short pedicelled in capitate clusters in a dense flat-topped or loose convex open inflorescence, 10-16 flowered; involucre subcylindric or subturbinate, 3.5-6.5 mm. high, its mostly straw-colored bracts oblong or linear-oblong; achenes top-shaped or oblong, villous-pubescent. 2.

2. Leaves linear-lanceolate, spreading, 4-8 mm. wide, yellowish, not strongly punctate, not viscid, distinctly 1-nerved, or the lower sometimes with a pair of very indistinct lateral nerves; involucre subturbinate, its straw-colored bracts linear-oblong or the lower oblong, scarcely viscid; heads sessile or short pedicelled in a dense flat-topped inflorescence, 10-13 flowered; achenes top-shaped, villous-pubescent. Species of the lower Mississippi Valley.

2. EUTHAMIA LEPTOCEPHALA.

2. Leaves narrowly linear, 2-10 mm. wide, light green, punctate, glutinous, distinctly 1-nerved, or the larger 3-nerved; involucre subcylindric or subturbinate, its straw-colored bracts linear-oblong, or the lower oblong, blunt, viscid; heads sessile or short-pedicelled in capitate cluster in a rather open, scarcely flat-topped inflorescence 13-16-flowered; achenes oblong, villous-pubescent. Upper Mississippi basin species of the high prairies. 3.

3. Leaves lance-linear, taper-pointed, 2-4 mm wide, or occasionally wider, obscurely punctate on the upper surface, not viscid or but slightly so; involucre 3-4 mm. high, subcylindric; bracts of the involucre unequal, soft, linear, scarcely glutinous; pedicels

subtended by very minute subulate bracts. More northern prairie species.

3. EUTHAMIA MEDIA.

3. Leaves linear-attenuate, acuminate, 2-5 mm. wide, strongly punctate on both faces, more or less viscid; involucre 5-6 mm. high, subturbinate; bracts of the involucre oblong-linear or oblong, blunt, firm, very glutinous; pedicels subtended by linear bracts. Western and Southern prairie species.

4. EUTHAMIA GYMNOSPERMOIDES.

1. EUTHAMIA HIRTELLA Greene, Leaflets, Bot. Obs. and Crit.

1: 180 1906.

If I have interpreted Dr. Greene's species rightly, this is a tall, simple-stemmed plant, branching at the top, 7.5-15 dm. tall, with much the aspect of *Leptilon canadense*; leaves spreading, 7.5-12.5 cm. long, 8-14mm. wide, 3-5-ribbed, at least the midrib conspicuous, the lateral very faint, sparsely to densely short-hairy on both faces. Appears to be a marsh or swamp species. Those who prefer to use *Solidago* for the name of these species may use *SOLIDAGO HIRTELLA* (Greene) Bush, n. comb. The range of this species is from Massachusetts(?) to Wisconsin, south to Kentucky and Tennessee.¹

¹I have concluded with Dr. Greene that *EUTHAMIA GRAMINIFOLIA* (L.) Nuttall, to which were formerly referred all the species of *EUTHAMIA* in North America except *EE. OCCIDENTALIS*, *TENUIFOLIA* and *LEPTOCEPHALA*, is a species of the northeastern States and Canada, and I have not seen any specimens from the interior that I could refer to it.

Britton in the Illustrated Flora says of *EUTHAMIA GRAMINIFOLIA*, "New Brunswick to Saskatchewan, Alberta, Florida, Nebraska and Wyoming; heads 20-30 flowered." I have not seen any specimens from Saskatchewan, Alberta, Florida, Nebraska or Wyoming that had heads with so many flowers.

Fernald in Gray's New Manual says of *Solidago graminifolia*, "East Quebec to Saskatchewan, New Jersey, Illinois, Missouri and North Carolina; heads 20-30 flowered." I have not seen any specimens from Saskatchewan, Illinois, Missouri, or North Carolina, that had heads with so many flowers.

Small in his Flora says of *EUTHAMIA GRAMINIFOLIA*, "Nova Scotia to the Northwest Territory, Florida and Kansas; ray-flowers 12-30." I have not seen any specimens from the Northwest Territory, Florida or Kansas that had heads with so many ray-flowers.

Gray in the Flora of North America says of *Solidago lanceolata*, "Canada to Georgia, northwest to Montana." I have not seen any specimens from Georgia or Montana that I thought were this species.

SPECIMENS EXAMINED:

MASSACHUSETTS:

Without definite locality, ex Chapman Herbarium, date not given, Herb. No. 785331, but possibly an error of labeling, as this is the only specimen seen from so far east.

CONNECTICUT:

New Haven, *Eaton*, date not given, Herb. No. 75066;
Norfolk, *Greenman*, September 25, 1910, Herb. No. 737760.

DISTRICT OF COLUMBIA:

Brookland, *Nieuwland*, 1909, N. D. Herb. No. 2188;
Brookland, *Nieuwland*, September 3, 1911, N. D. Herb. No 1654;
Brookland, *Nieuwland*, September 15, 1912, N. D. Herb. No 10325;
Brookland, *Nieuwland*, September 15, 1912, N. D. Herb. No. 10302;
Takoma Park, *Hitchcock*, 1904, U. I. Herb.

MARYLAND:

Ammendale, *Trelease*, September 12, 1880, Herb. No. 75070;
Chevy Chase, *Greene*, October 5, 1905, N. D. Herb. No. 5462;
Woodside Station, *Painter* 1064, September 4, 1904, Herb. No. 75108.

NEW JERSEY:

Passaic, *Woolson*, September, 1871, U. S. Herb.;
Raritan Landing, *Kelsey* 148, September, 1892, U. S. Herb.

PENNSYLVANIA:

Gettysburg, *Glatfelter*, September 16, 1892, Herb. No. 75081;
Gettysburg, *Redfield*, September 12, 1865, Herb. No. 75080;
Harrisburg, *Fritchey*, September 3, 1889, Herb. No. 75076;
Lancaster County, *Eby*, October, 1893, Herb. No. 75320;
Lower Cove, collector not given, August, 1824, the plant marked A on this sheet, Herb. No. 75098;

Mountville, *Eby*, August, 1890, Herb. No. 75131;
York County, *Glatfelter*, October, 1892, Herb. No. 75134.

OHIO:

Berea, *Watson*, September, 1897, Herb. No. 75109;
Burton, *Drushel*, August 13, 1913, Herb. No. 748850.

INDIANA:

Chain Lakes, *Nieuwland*, September 26, 1911, N. D.
Herb. No. 2080;
Kosciusco County, *Deam* 1509, August 17, 1906;
Lake Maxinkuckee, *Scovell* and *Clark* 1114, August 9,
1900, Herb. No. 75096;
Michigan City, *Nieuwland*, September 22, 1910, N. D.
Herb. No. 702;
Mineral Springs, *Nieuwland*, September 26, 1912, N. D.
Herb. No. 10279;
Notre Dame, *Nieuwland*, 1910, N. H. Herb. No. 9492;
Notre Dame, *Nieuwland*, 1910, N. D. Herb. No. 1654;
Notre Dame, *Nieuwland*, August 16, 1908, Herb. No.
742028;
New Albany, *Davis*, September 15, 1909, Herb. No. 75112;
New Albany, *Davis*, September 15, 1909, Herb. No. 75111;
New Albany, *Davis*, September 15, 1909, Herb. No. 75110;
Tamarack, *Nieuwland*, 1910, N. D. Herb. No. 9495;
Tamarack, *Nieuwland*, September 22, 1910, N. D. Herb.
Herb. No. 732;
Wells County, *Deam* 465, August 27, 1905, Herb. No.
75116.

MICHIGAN:

Detroit, *Glatfelter*, date not given, the plant marked A
on this sheet, Herb. No. 75046;
St. Clair County, *Dodge*, 1880, Herb. No. 75045.

WISCONSIN:

Milwaukee, *Lapham*, 1843, Herb. No. 75042.

KENTUCKY:

Edmonson County, *Price*, September, 1897, Herb. No.
75124;
Edmonson County, *Price*, September, 1897, Herb. No.
75093.

ILLINOIS:

- Algonquin, *Nason*, September 4, 1878, U. I. Herb.;
 Belleville, *Engelmann*, August, 1845, Herb. No. 75,117;
 Carlinville, *Andrews*, July 29, 1891, U. I. Herb.;
 Evanston, *Sherff*, September 20, 1910, Herb. No. 75,003;
 Graceland, *Pammel*, August 18, 1887, Herb. No. 75,068;
 Lake Forest, *Jensen*, September, 1896, Herb. No. 75,130;
 Lake Villa, *Gleason* and *Shobe* 204, August 9, 1906,
 U. I. Herb.;
 Lake Villa, *Gleason* and *Shobe* 212, August 9, 1906,
 U. I. Herb.;
 Mascoutah, *Welsch*, 1862-1871, U. I. Herb.;
 Peoria, *Brendel*, date not given, U. I. Herb.;
 Peoria, *McDonald*, August, 1887, U. I. Herb.;
 Princeville, *Chase*, 754, August 24, 1900, U. I. Herb.;
 Taylorville, *Andrews*, August 20, 1898, U. I. Herb.;
 Tracy, *Greenman*, August 22, 1908, Herb. No. 721,717;
 Tracy, *Greenman*, August 22, 1908, Herb. No. 740,596;
 Wady Petra, *Chase*, September 5, 1896, U. I. Herb.;
 Wady Petra, *Chase* 679, October 28, 1900, U. I. Herb.;
 Winnetka, *Sherff*, September 8, 1912, Herb. No. 75,002;
 Winnetka, *Sherff* 1911, September 8, 1912, U. I. Herb.

TENNESSEE:

- Richland Station, *Gattinger*, August 27, 1883, Herb.
 No. 75072;
 Sumner County, *Eggert*, September 17, 1897, Herb.
 No. 75125.

No specimens of this species have been seen from Missouri, but its range must include Eastern Missouri, and the Belleville, Illinois, collection, shows that this species reaches the Mississippi River bottoms.

2. *EUTHAMIA LEPTOCEPHALA* (T. & G.) Greene, Mem, Torr. Club 5: 321. 1894.

Solidago leptcephala T. & G. Fl. N. A. 2:226. 1841.

Solidago leptcephala T. & G., Bush in Plants of South-eastern Missouri, No. 176.

Missouri to Louisiana and Texas, according to Britton in Illustrated Manual, which is correct.

East Nebraska to Mississippi and Texas, according to Fernald

in Gray's New Manual, but the East Nebraska reference must be a mistake, as this lowland species does not get up to Nebraska.

West Louisiana and Texas, in a narrow-leaved form from Northwestern Arkansas, *Harvey*, according to Gray in the Flora of North America, but the northwestern Arkansas reference must refer to some other species, most probably *E. GYMNOSPERMOIDES*.

A species of the low alluvial bottoms of the lower Mississippi River valley, north to Southeastern Missouri and Southern Illinois west to Texas.¹

First collected by *Bush*.

SPECIMENS EXAMINED:

MISSOURI:

Butler County, *Bush* 3704, October 15, 1905, Herb. No. 75106;

Butler County, *Bush* 3704, October 15, 1905, U. S. Herb. No. 492092;

Butler County, *Bush* 3704A, October 15, 1905, Herb. No. 75004;

¹ Allied to *E. LEPTOCEPHALA* and yet abundantly distinct from it, is a plant of the Southeastern States, which may be disposed of as

EUTHAMIA FASTIGIATA Bush, n. sp.

Stems simple, fastigiately branched at the top, striate, smooth and shining, 6-8 dm. tall; branches, branchlets and pedicles somewhat scabrous; leaves 3-6 cm. long, 3-6 mm. wide, minutely punctate on the upper surface, minutely scabrous on the lower, minutely serrulate on the margins, 1-ribbed, or with a pair of indistinct lateral nerves, or the larger 3-5-nerved; inflorescence a flat-topped corymb; heads more or less loosely pedicelled, about 3.5 mm. high, sub-cylindric, 16-18 flowered; bracts of the involucre in several series, yellow, ovate to ovate-oblong, the inner soft and thin; achenes top-shaped, minutely pubescent.

Apparently a plant of the lowlands, confined to the Southeastern States, allied also to *E. CHRYSOTHAMNOIDES* Greene, of Arkansas and Louisiana, but very distinct.

SPECIMENS EXAMINED:

NORTH CAROLINA:

Biltmore, BILTMORE HERBARIUM, 993b, August 23, 1897, Herb. No. 75054, TYPE.

FLORIDA:

Jacksonville, *Curtiss* 5347, October 1, 1894, Herb. No. 75062;

Jacksonville, *Curtiss*, 1349, October, N. D. Herb. No. 6333.

VIRGINIA:

White Sulphur Springs, *Mackenzie* 495, September 7, 1903.

For those who prefer the name *Solidago* for these species, I offer *SOLIDAGO FASTIGIATA* Bush, n. sp., as the name of this plant.

- Campbell, *Bush*, October 26, 1892, Herb. No. 75019;
Campbell, *Bush*, October 26, 1892, Herb. No. 75038;
Campbell, *Bush*, October 26, 1892, Herb. No. 75017;
Campbell, *Bush* 6369, October 7, 1910, Herb. No. 75009;
Campbell, *Bush* 6369, October 7, 1910, U. S. Herb. No.
672974;
Dunklin County, *Bush*, October 26, 1892, Herb. No.
75039;
Poplar Bluff, *Letterman*, date not given, Herb. No. 774234.

ARKANSAS:

- Arkansas Post, *Kellogg*, September 23, 1909, Herb. No.
75313;
Greene County, probably Paragould, *Eggert*, September
26, 1893, Herb. No. 75016;
Greene County, probably Paragould, *Eggert*, September
26, 1893, Herb. No. 75020;
Greene County, probably Paragould, *Eggert*, September
26, 1893, Herb. No. 759862;
Moark, *Bush* 3664, October 15, 1905, Herb. No. 75107;
Moark, *Bush* 3664A, October 15, 1905, Herb. No. 75005;
Moark, *Palmer* 4791, October 31, 1913, Herb. No. 717310;
Paragould, *Eggert*, October 26, 1917, Herb. No. 720505;
Peach Orchard, *Letterman*, date not given, Herb. No. 77433
Peach Orchard, *Letterman*, date not given, Herb. No.
774339;

MISSISSIPPI:

- Panola, *Eggert*, September 16, 1896, Herb. 75018;
Without definite locality, *Hilyard*, 1858, Herb. No. 75010.

LOUISIANA:

- Pointe a la Hache, *Langlois*, November 6, 1885, Herb.
75022;
Without definite locality, *Buckley*, September 18, Herb.
No. 75068.

TEXAS:

- Columbia, *Bush* 320, November 1, 1889, Herb. No. 75034;
Dallas, *Reverchon*, September, Herb. No. 75035;
Dallas, *Reverchon* 1323, N. D. Herb. No. 6314;
Dallas, *Reverchon* 446, September, 1880, Herb. No. 75033
Dallas, *Reverchon*, September, Herb. No. 75030;

Grand Saline, *Reverchon* 2050, October 18, 1900, Herb. 75032;
 Houston, *Lindheimer*, September, 1842, Herb. No. 75014;
 Hutchinson County, *Carleton* 427, August, 1891, U. I. Herb.;
 Industry, *Lindheimer*, September, 1844, Herb. No. 75011;
 Industry, *Lindheimer*, September, 1844, Herb. No. 75036;
 Miller's Ferry, near Dallas, *Reverchon*, October, 1877, Herb. No. 75021;
 Pierce, *Tracy* 7327, September 14, 1901, Herb. No. 75031;
 Rosenberg, *Palmer* 6639, September 25, 1914, Herb. No. 75009;
 Texarkana, *Heller* 4258, September 15, 1898, Herb. No. 75053;
 Texarkana, *Heller* 4258, September 15, 1898, U. I. Herb.;
 Texarkana, *Letterman*, October 19, 1894, Herb. No. 75014;
 White Oak Bayou, *Lindheimer*, September, 1842, Herb. No. 75012;
 Without definite locality, *Lindheimer*, 1843, Herb. No. 75037.

3. *EUTHAMIA MEDIA* Greene, *Pittonia* 5:74. 1902.

Solidago Moseleyi Fernald, *Rhodora* 10:93. 1908.

Euthamia Moseleyi Fernald, *Rhodora* 10:93. 1908.

Solidago lanceolata L., Bush in Flora of Jackson County Missouri, No. 231, 1882, in great part and including *E. GYMNOSPERMOIDES*; Tracy in Flora of Missouri, No. 616, 1886; Eggert in Catalogue of Plants of Saint Louis, Missouri, 1891.

Solidago tenuifolia Pursh, Bush in Flora of Jackson County, Missouri, No. 688, 1885, in small part, mostly *E. GYMOSPERMOIDES*; Tracy in Flora of Missouri, No. 632, 1886, mainly *E. GYMNOSPERMOIDES*.

EUTHAMIA GRAMINIFOLIA (L.) Nutt., Mackenzie and Bush in Manual of the Flora of Jackson County, Missouri, 1902, as to description, but including *E. GYMNOSPERMOIDES*.

Not mentioned by Britton in Illustrated Flora, Fernald in Gray's New Manual, but from the description is Fernald's *Solidago Moseleyi*.

No species of *EUTHAMIA* is given by Dr. Daniels in his Flora of Columbia, Missouri.

Illinois and Missouri, southward, according to Greene, l. c.

First collected by *Engelmann*.

I have concluded that the prairie plant of Ohio, Indiana, Illinois, Missouri, Iowa and Michigan belongs to Dr. Greene's species, and I have been unable to distinguish Fernald's *Solidago Moseleyi* from it. If we are to accept Dr. Greene's *E. GYMNOSPERMOIDES* which has been generally included in *E. GRAMINIFOLIA*, *E. TENUIFOLIA* and *E. LEPTOCEPHALA*, as a valid species, *E. MINOR* Greene, and *E. FLORIBUNDA* Greene (the last having been accepted by Fernald in Gray's New Manual as a species in *Solidago*, may be known as *SOLIDAGO FLORIBUNDA* (Greene) Bush, n. comb., if these species are finally placed in *Solidago*), it seems to me very reasonable to accept this species, and several others of Dr. Greene's, than try to keep it in *E. GRAMINIFOLIA*, from which it differs in several important characters, notably the fewer-flowered heads.¹

If the species of *EUTHAMIA* are to be included in *Solidago*, this species will take the name *SOLIDAGO MEDIA* (Greene) Bush, n. comb.²

¹ *EUTHAMIA CAMPORUM* Greene, of the far West and Northwest, seems distinct from *E. MEDIA* in the firm, almost coriaceous leaves, which are strongly punctate on both faces. If this species is to be referred to *Solidago*, it should bear the name *SOLIDAGO CAMPORUM* (Greene) Bush, n. comb. Amongst the many specimens of this species examined, I refer the following:

KANSAS:

Riley County, *Norton*, 231, September 13, 1895, Herb. No. 75294.

² I have not been able to see many specimens of *EUTHAMIA REMOTA* Greene, but the few I have seen were sufficient to cause me to believe that this species is very distinct from *E. TENUIFOLIA*, to which it has been referred by Britton in Illustrated Flora, and perhaps by Fernald in Gray's New Manual, and Small in his Flora. This belongs to the *E. TENUIFOLIA* group, with upper leaves 1-ribbed, the lower often with a pair of indistinct lateral nerves, but the leaves are much longer and wider, do not droop, and the involucre is cylindrical in shape, and attenuate at the base. In aspect it resembles *E. MEDIA* on the one hand, and on the other *E. TENUIFOLIA*, but is *remote* from both of these species. Like *E. HIRTELLA*, this species is also a lake region species. The thickish, oblong-linear bracts, in several series, with thick green tips, alone separates this species from *E. TENNIFOLIA*.

Of the few sheets of specimens examined, I feel certain of the following:

ILLINOIS:

Chicago, *Glatfelter*, August 20, 1893, Herb. No. 75312.

INDIANA:

Dune Park, *Chase* 278, September 19, 1898, U. I. Herb.;

Dune Park, *Greenman*, 2692, September 11, 1908, Herb. No. 740564;

This seems abundantly distinctive from *EUTHAMIA NUTTALLII* Greene (or if accepted as a valid species in *Solidago*, *SOLIDAGO NUTTALLII* (Greene) Bush, n. comb.), a species of the middle Atlantic slope, although it varies much in the length and width of the leaves.

SPECIMENS EXAMINED:

INDIANA:

- Dune Park, *Chase* 521A, August 27, 1897, Herb. No. 75060;
 Miller's, *Nieuwland*, September 28, 1911, N. D. Herb. No. 9534;
 Mineral Springs, *Nieuwland*, September 22, 1910, N. D. Herb. No. 733;
 Mineral Springs, *Nieuwland*, September 22, 1910, N. D. Herb. No. 733²;
 Mineral Springs, *Nieuwland*, September 26, 1912, N. D. Herb. No. 10280;
 Mineral Springs, *Nieuwland*, September 26, 1912, N. D. Herb. No. 10280;
 Noter Dame, *Nieuwland*, 1909, N. D. Herb. No. 2247;
 South Bend, *Nieuwland*, August 27, 1912, Herb. No. 742057;
 Tamarack, *Nieuwland*, August 20, 1912, Herb. No. 720022.

ILLINOIS:

- Algonquin, *Nason*, September 14, 1878, U. I. Herb.;
 Berwyn, *Calkins*, September, 1907, N. D. Herb. No. 5463;
 Carlinville, *Andrews*, September 18, 1889, U. I. Herb.;
 Carlinville, *Andrews*, September 14, 1890, U. I. Herb.;
 Carlinville, *Andrews*, September 25, 1982, U. I. Herb.;
 Champaign County, *Clinton*, September, 1895, U. I. Herb.;
 Champaign County, *Hays*, September, U. I. Herb.;
 Champaign County, *Percival*, September 14, 1876, U. I. Herb.;

-
- Dune Park, *Greenman*, September, 1908, Herb. No. 742193;
 Indiana Harbor, *Deam* 5286, August 30, 1908, determined by Greene as *EUTHAMIA REMOTA*;
 Lake Maxinkuckee, *Scovell* and *Clark* 1431, 1900, Herb. No. 75333;
 Miller's, *Greenman*, August 20, 1908, Herb. No. 742191.

Chicago, *Engelmann*, September, 1840, Herb. No. 75440;
 Chicago, *McDonald*, September, 1893, U. I. Herb.;
 Chicago, *Sherff*, 1765, August 24, 1912, Herb. No. 75316;
 Chicago, *Sherff* 1765, August 24, 1912, U. I. Herb.;
 Decatur, *Clokey*, September, 1898, U. I. Herb.;
 Kankakee, *Sherff* 1765, August 24, 1912, Herb. No. 75315;
 Mascoutah, *Welsch*, 1862-1871, U. I. Herb.;
 Myra, *Clinton*, August 29, 1899, U. I. Herb.;
 Oquawka, *Patterson*, September, 1876, TYPE, Herb. No.
 75126;
 Peoria, *Brendel*, date not given, U. I. Herb.;
 Wady Petra, *Chase*, September 21, 1895, Herb. No.
 75332;
 Waukegan, *Gleason* and *Shobe* 361, August 16, 1906,
 U. I. Herb.;
 Without definite locality, *Mead*, September, 1848, Herb.
 No. 75300;
 Woodford County, *Brendel*, September, 1858, U. I. Herb.;
 Yates City, *McDonald*, September, 1893, U. I. Herb.

MISSOURI:

Allenton, *Letterman*, August 25, 1895, Herb. No. 775495;
 Dodson, *Bush*, 362, September 26, 1897;
 Dodson, *Mackenzie* 806, September 18, 1895, Herb. No.
 75101;
 Eolia, *Davis*, 1352, August 30, 1915, Herb. No. 794746;
 Eolia, *Davis* 551, August 30, 1915;
 Independence, *Bush* 3, 1882, Herb. No. 75120;
 Jackson County, *Bush*, September 3, 1888, Herb. No.
 75100;
 Jackson County, *Bush* 216, October 8, 1893, Herb. No.
 75103;
 Jackson County, *Bush* 216, October 8, 1893, U. S. Herb.
 No. 49271;
 Oakwood, *Davis* 1325, October 4, 1911, Herb. No. 708957;
 Oakwood, *Davis* 297, October 10, 1911, Herb. No. 762164;
 Oakwood, *Davis* 3297, October 9, 1914, Herb. No. 765854;
 Oakwood, *Davis* 7303, September 11, 1915;
 Oakwood, *Davis* 7307, September 11, 1915;
 Oakwood, *Davis* 6098, September 11, 1915, Herb. No.
 797842;

- Oakwood, *Davis* 6046, September 24, 1915, Herb. No. 796509;
 Oakwood, *Davis* 6046, September 24, 1915, Herb. No. 787342;
 South Webster, *Eggert*, October 4, 1877, Herb. No. 75127;
 South Webster, *Eggert*, October 4, 1877, Herb. No. 75128;
 South Webster, *Eggert*, October 11, 1877, Herb. 75129;
 South Webster, *Eggert*, October 11, 1877, Herb. No. 75105;
 South Webster, *Eggert* October 11, 1877, Herb. No. 720237;
 St. Louis, *Engelmann* 617, September, 1833, Herb. No. No. 75040;
 St. Louis, *Glatfelter*, September 19, 1897, Herb. No. 75133;
 Waldo Park, *Hoffman*, September 21, 1916;
 Whiteside, *Davis* 661, September 20, 1915;
 Whiteside, *Davis* 6004, September 20, 1915, Herb. No. 796490;
 Whiteside, *Davis* 6004, September 20, 1915, Herb. No. 787344;
 Whiteside, *Davis*, 6056, September 20, 1915, Herb. No. 787345;
 Whiteside, *Davis* 6056, September 20, 1915, Herb. No. 796489;
 Whiteside, *Davis* 6083, September 20, 1915, Herb. No. 797823;
 Whiteside, *Davis* 6083, September 20, 1915, Herb. No. 787343;
 Whiteside, *Davis* 8244, September 20, 1915;
 Whiteside, *Davis* 1710, September 17, 1916;
 Whiteside, *Davis* 1962, September 17, 1916;
 Whiteside, *Davis* 1857, September 18, 1916;
 Without definite locality, *B. Frank*, 1837, Herb. No. 75098; this sheet bears label which reads "*Baccharis angustifolia* Mx. Unio itiner. 1837. In civitate Missouri. leg. b. Frank," which shows that the collector took this plant to be different from *Solidago lanceolata* L., but was in error in referring it to *Baccharis*, which does not occur anywhere near Missouri.
 Without definite locality, *Engelmann*, date not given, Herb. No. 75041.

IOWA:

- Ames, *Pammel*, September 10, 1897, Herb. No. 75049;
 Decatur County, *Anderson*, September 19, 1904, Herb.
 No. 75114;
 Decatur County, *Fitzpatrick* 86, September 8, 1898,
 Herb. No. 75052;
 Muscatine, *Mackenzie* 275, September 3, 1892;
 Muscatine, *Pammel* and *Reppert* 1206, September 10,
 1912, Herb. No. 75083;

NEBRASKA:

- Lincoln, *Webber*, September, 1887, Herb. No. 75281;
 St. Helena, *Bruhin*, date not given, Herb. No. 75280;

MINNESOTA:

- Lake Carlos, *Ross*, July 1, 1891, Herb. No. 770969;
 Lake Chesago, *Wislizenus* 538, August 14, 1886, Herb.
 No. 75048;
 Minneapolis, *Herrick*, July 28, 1878, Herb. No. 774334.

WISCONSIN:

- Kenosha, *Gates*, August 30, 1909, U. I. Herb.

4. EUTHAMIA GYMNOSPERMOIDES Greene, *Pittonia* 5:75. 1902.
Solidago gymnospermoides (Greene) Fernald, *Rhodora* 10:
 93. 1908.

EUTHAMIA GRAMINIFOLIA (L.) Nutt., *Mackenzie* and *Bush*
 in *Manual of the Flora of Jackson County, Missouri*,
 in small part, 1902; *Palmer* in *Catalogue of Plants of*
Jasper County, Missouri, Nos. 91 and 196, 1913.

Solidago lanceolata L., *Bush* in *Flora of Jackson County*,
Missouri, in small part, No. 231, 1882.

Solidago tenuifolia Pursh, *Bush* in *Flora of Jackson County*,
Missouri, in large part, No. 688, 1885; *Tracy* in *Flora*
of Missouri, No. 632, 1886; *Shepard* in *List of Greene*
County Plants.

EUTHAMIA TENUIFOLIA Pursh, of *Whipple's report*, accord-
 ing to *Greene*, l. c.

East Kansas to Louisiana and Texas, according to *Fernald*
 in *Gray's New Manual*, but the Louisiana part of the range must
 belong to some other species.

Nebraska, Kansas, Texas and Louisiana, according to *Britton*
 in *Illustrated Flora*, but I have not seen any specimens from so
 far north as Nebraska, or from Louisiana.

Not mentioned by Small in his Flora, second edition.

Antelope Hills of the Canadian, *Bigelow*, according to Greene, l.c.

Cherokee Nation, *Blankinship*, August 15, 1875, according to Greene, l. c.

Very different from *E. LEPTOCEPHALA*, and in aspect strongly recalling the Mexican genus *Gymnosperma*, Greene, l. c.

Dr. Greene neglected to fix the type, which was based on my No. 252.

In a narrow-leaved form from northwestern Arkansas, *Harvey*, according to Gray in Flora of North America, in citing the range of *Solidago leptocephala*.¹

First collected by Broadhead.

This is a species of the high prairies of Missouri, Kansas, Indian Territory and Texas.²

¹ A plant of the lowlands of Southern Arkansas and Louisiana has been described by Dr. Greene as *E. CHRYSOTHAMNOIDES*. It is a taller plant, more slender, with corymbose inflorescence, longer heads with firm bracts. I have examined the type specimens collected by Letterman, and the species has little affinity with *E. GRAMINIFOLIA*, to which it has been referred, but is more nearly related to *E. GYMNOSPERMOIDES*. If this is a valid species, and is to be placed in *Solidago*, I propose *SOLIDAGO CHRYSOTHAMNOIDES* (Greene) Bush, n. comb. for this species.

Dr. Small does not mention this species in his Flora, second edition.

² An anomalous species of the far West and Northwest, which seems to have no close affinity with any of the known species of *EUTHAMIA*, I propose as

EUTHAMIA BRACTEATA Bush, n. sp.

Stems 4-6 dm. tall, striate, smooth and glabrous; leaves oblong-lanceolate, thin, deep green, more or less spreading, very wide, the widest of any species known to me, according to their length, 4-6 cm. long, 6-12 mm. wide, smooth on both faces, minutely serrulate on the edges all around, 3-nerved, the midvein conspicuous, the lateral nerves indistinct, neither viscid nor punctate; branches, branchlets and pedicles sharply angular, somewhat scabrous; heads mostly pedicelled or 2-3 in sessile capitate clusters, arranged in a dense contracted, rounded corymb, 16-20 flowered, 5-5.5 mm. high; involucre broadly campanulate, its bracts in several series, broadly ovate, thin, yellow, with scarious edges, very conspicuous, minutely ciliate, rounded at the tips, not viscid nor glutinous; achenes oblong, appressed-pubescent.

SPECIMENS EXAMINED:

COLORADO:

Cañon City, *T. S. Brandegee* B532, 3072, month not given, 1872, TYPE, Herb. No. 75079. This sheet has penciled on it this, "Porter ss^{av}

SPECIMENS EXAMINED:

MISSOURI:

- Cass County, *Broadhead*, September 6, 1864, Herb. No. 75306;
 Cass County, *Broadhead*, September 6, 1864, Herb. No. 75308;
 Golden City, *Palmer* 4587, October 6, 1913, Herb. No. 717285;
 Jasper County, *Trelease*, September 18, 1898, Herb. No. 75309;
 Lee's Summit, *Mackenzie* 328, September 18, 1898;
 Springfield, *Standley* 9123, August 21, 1912, U. S. Herb. No. 688042;
 Springfield, *Standley*, September, 1905, U. S. Herb. No. 735548;
 Strafford, *Standley* 9458, August 27, 1912, U. S. Herb. No. 688374;
 Waldo Park, *Hoffman*, September 15, 1916;
 Webb City, *Palmer*, 91, September 30, 1901, Herb. No. 75104;
 Webb City, *Palmer* 196, September 30, 1901, Herb. No. 762156.

KANSAS:

- Manhattan, *Norton*, September, 1893, Herb. No. 75043.

OKLAHOMA:

- Alva, *Stevens* 2807, September 20, 1913, Herb. No. 782062;
 Alva, *Stevens* 2807, September 20, 1913, U. I. Herb.;
 Alva, *Stevens* 2881, October 5, 1913, U. I. Herb.;

S. occidentalis J. & G., but heads not pedicelled *nor* involucre scales linear-lanceolate or acute. Perhaps a connecting link. Eaton agrees with me that it is *S. lanceolata*. J. H. R(edfield).'' Evidently this specimen has given several persons much trouble trying to put it into some described species.

ALBERTA:

- Rosedale, *Marion E. Moodie* 1187, August 10, 1915, Herb. No. 800171.

WYOMING:

- Beaver Creek, *Aven Nelson* 8558, July 21, 1901, Herb. No. 75097.

NORTH DAKOTA:

- Leeds, *Lunell*, August 6, 1905.

For those who consider *EUTHAMIA* as only a subgenus of *Solidago*, I offer the name *SOLIDAGO BRACTEATA* Bush, n. sp. for this plant.

Cherokee Nation, *Blankinship*, August 19, 1895, Herb. No. 75088;

Sapulpa, *Bush* 250, September 19, 1894, Herb. No. 75024;

Sapulpa, *Bush* 251, October 3, 1894, Herb. No. 75026;

Sapulpa, *Bush* 252, October 6, 1894, TYPE, Herb. No. 75025;

Tulsa, *Stevens* 2986, October 10, 1913, U. I. Herb.;

Tulsa, *Stevens* 2986, October 10, 1913, Herb. No. 781160;

Vinita, *Bush* 245, September 18, 1894, Herb. No. 750-3;a

Without definite locality, but probably Limestone Gap, *Butler*, 1871, Herb. No. 75304;

Without definite locality, *Waugh*, date not given, Herb. No. 75029;

Without definite locality, *Waugh*, date not given, Herb. No. 75027.

NEW MEXICO:

Crossing of the Arkansas, *Fendler* 351, September 3, 1847, Herb. No. 75043.

TEXAS:

Columbia, *Bush* 1552, October 17, 1900, Herb. No. 75113;

Hadley, *Reverchon* 1475, September, 1878, Herb. No. 75084;

Houston, *Lindheimer* 82, October, 1842, Herb. No. 75301;

No state Given, *Trelease*, no date given, Herb. No. 75102.¹

¹ A few remarks on the status and distribution of *EUTHAMIA TENUIFOLIA* may be very appropriate here, inasmuch as this species has been but little understood, and has been assigned a range that is not supported by the material studied by me. I find many collections labeled *Solidago tenuifolia* or *EUTHAMIA TENUIFOLIA* from Missouri, and from many States in the interior, and the specific name is given in many reports and lists of plants. In one lot alone of less than 70 sheets, I found 15 or 16 different species, all bearing the name *Solidago tenuifolia* or *EUTHAMIA TENUIFOLIA*.

Britton in the *Illustrated Flora* in 1913, Fernald in *Gray's New Manual* in 1908, and Small in his *Flora* in 1913, all agree that this species occurs in the interior, in Illinois, Northern Indiana, Southern Wisconsin and locally in the interior.

Britton in the *Illustrated Flora* in 1913, says of this species, "Massachusetts to Illinois, Wisconsin, Florida and Louisiana." The Illinois, Wisconsin, Florida and Louisiana part of the range must belong to other species, as I have not seen any specimens of this species from those States.

Fernald in *Gray's New Manual* in 1908, says of *Solidago tenuifolia*, "East Massachusetts to Florida; also in Northern Indiana and Southern Wisconsin." I have not seen any specimens of this species from Indiana,

Wisconsin or Florida, and there are no specimens from Wisconsin in the Gray Herbarium.¹

Small in his *Flora*, second edition, in 1913, says of *EUTHAMIA TENUIFOLIA*, "Massachusetts, Florida and Texas, and locally in the interior." Evidently Dr. Small followed Britton and Fernald in assigning this species to the Lake region of the interior, but I have not seen any specimens from the interior, nor from Florida or Texas.

Gray in *Flora of North America* in 1884, says of *Solidago tenuifolia*, "New England to Florida and Texas," the range being thus restricted to the sea-coast, but I have not seen any specimens of *EUTHAMIA TENUIFOLIA* from Florida or Texas. Dr. Gray evidently included specimens of *E. MINOR* and *E. PULVERULENTA* in *Solidago tenuifolia*.

From a careful study of a large amount of material of *EUTHAMIA TENUIFOLIA* and allied species, at my disposal, I have come to the conclusion that Britton, Fernald and Small have based the isolated interior occurrence of this species on specimens of *Solidago Moseleyi*, *EUTHAMIA MEDIA* and *E. REMOTA*. After more than thirty-five years acquaintance with this species, it is relegated to the range given it by Dr. Gray in 1880, which is that of a sea-coast species.

Having studied this species somewhat critically, it is with some confidence that I refer the following specimens to it.

MASSACHUSETTS:

Cape Cod, *Fritchey*, August 17, 1889, Herb. No. 75290;
Cape Cod, *Greenman* 410, September 4, 1890, Herb. No. 738578;
Norquit, *Sturtevant*, August 24, 1888, Herb. No. 75280;
Sharon, *Greenman* 345, October 17, 1897, Herb. No. 738543;
Southwick, *Seymore* 275, September 16, 1914, Herb. 789740;
Woods Hole, *Trelease*, September 16, 1881, Herb. No. 75282.

LONG ISLAND:

Eastport, collector not given, September 14, 1914, Herb. No. 75,278;
Hempstead Plains, *Schrenk*, September 7, 1893, Herb. No. 75277;
Woodhaven, *Hulst*, September 10, 1891, U. I. Herb.

RHODE ISLAND:

Kingston, *Morong*, August 21, 1879, Herb. No. 75319;
Narragansett River, *Englemann*, August 20, 1879, Herb. No. 75310;

¹ In a letter to the writer dated March 2, 1917, Mr. S. F. Blake says, "Dr. Robinson has handed me your letters regarding *Solidago tenuifolia* with the request that I look up the matter for you. I find only two sheets of this species from the interior in the Gray Herbarium. These are "'Prairies of Illinois, Dr. Mead'" and "'Moist prairie, Roby, Indiana, 20, Sept. 1906. O. E. Lansing, Jr. No. 2648.'" I do not see that these specimens differ in any essentials from material from Massachusetts and New Jersey. There is no material from Wisconsin in the herbarium."

I have not seen the specimens collected by Lansing, and therefore can not say what they are, but the probability is very great that they are *E. MEDIA*. I have, however, examined several sheets of Dr. Mead's collection from "Prairies of Illinois," and these are all *E. MEDIA*. There appears no sufficient reason for citing *E. TENUIFOLIA* from Southern Wisconsin, as no specimens are known from there, and as Illinois is not given in the Manual as part of the range of this species, I maintain that not only this State, but Indiana also be taken from the range of this species.

CONNECTICUT:

- Hartford, *Smith*, August, 1886, Herb. No. 75279;
 Southington, *Bissell* 1548, September 8, 1897, Herb. No. 75311;
 Stratford, *Eames*, September 8, 1892;
 Stratford, *Eames*, September 14, 1892.

NEW JERSEY:

- Atco, *Brinton*, October 5, 1888, Herb. No. 774343;
 Camden, *Martindale*, September 14, 1873, Herb. No. 75303;
 Cape May, *Redfield* 1489, September 11, 1878, Herb. No. 75299,
 the plant marked B on this sheet;
 Ocean County, *Mackenzie* 1028, September 16, 1904;
 Pemberton, *Redfield* 3105, September 5, 1867, Herb. No. 75298;
 Somerset County, *Perry*, date not given, Herb. No. 75321;
 South River, *Mackenzie* 3780, August 23, 1908, Herb. No. 75315;
 Without definite locality, *Beyrich*, date not given, Herb. No. 75295;
 Without definite locality, *Beyrich*, 1833, Herb. No. 75296.

DELAWARE:

- Ellendale, *Norton*, September 14, 1902, Herb. No. 75329;
 Without definite locality, *Nuttall*, date not given, Herb. No. 75297;

PENNSYLVANIA:

- Northampton County, *Rau*, 1880, Herb. No. 773853.

MARYLAND:

- Caroline County, *Smith*, September, 1888, U. I. Herb.;
 Snow Hill, *Norton*, September 13, 1902. Herb. No. 75328.

VIRGINIA:

- Fortress Monroe, *Vasey*, 1879, Herb. No. 773808;
 Munden, *Mackenzie* 1802, September 1-19, 1905;
 Northwest, *Heller* 732, September 23, 1892, Herb. No. 75331.

I have not seen any specimens of *EUTHAMIA TENUIFOLIA* south of Virginia, all south of there that I have examined belong to other species. As described in the Illustrated Flora and Gray's New Manual, *E. MINOR*, formerly included in *E. TENUIFOLIA*, is an aggregate of several distinct species. Of the real *E. MINOR*, I have only seen the following:

NORTH CAROLINA:

- Raleigh, *Ashe* 4632b, October, 1897, Herb. No. 75288;
 Raleigh, *Ashe* 4632b, October, 1897, Herb. No. 75289;

The tall robust plant that Dr. Greene took to be the *Erigeron Carolinianus* of Linnacus, seems to me to be very distinct from *E. TENUIFOLIA*, and to it I refer the following.

VIRGINIA:

- Norfolk, *Jensen*, Autumn, 1906, Herb. No. 75322;
 Norfolk, *Jensen*, Autumn, 1906, Herb. No. 75323.

Allied to *E. TENUIFOLIA*, but apparently distinct from it in the very small heads and narrow involucre, is a plant that Dr. Greene has described as *E. MICROCEPHALA* (or if a valid species, and to be referred to *Solidago*, *SOLIDAGO MICROCEPHALA* (Greene) Bush, n. comb.), of which I have examined the following.

SOUTH CAROLINA:

Aiken, *Ravenel*, September 26, 1886, Herb. No. 75305.

GEORGIA:

Without definite locality, but from the label and writing apparently collected by *Chapman*, ex N. Riehl Herbarium, date not given, Herb. No. 75318.

Related to the last, but differing from it in the scabrous pubescence and the pubescent leaves, is a plant described by Dr. Greene as *E. SCABRA*, a species of the interior, rather than the seacoast. If it should prove to be a good species, and is transferred to *Solidago*, this plant will bear the name *SOLIDAGO SCABRA* (Greene) Bush, n. comb. I refer here the following:

FLORIDA:

Jacksonville, *Curtiss* 5314, October 26, 1894, Herb. No. 75330.

SOUTH CAROLINA:

Eutawville, *Eggleston*, 4998a, Sept. 6-11, 1909, Herb. No. 75327.

A species of the Southwest, *E. PULVERNULENTA* Greene, apparently extends eastward to Florida, if I am right in referring to it a specimen distributed by *Curtiss*. Should it be accepted as a valid species, and be placed in *Solidago*, it will bear the name *SOLIDAGO PULVERULENTA* (Greene) Bush, n. comb. I refer to it the following:

FLORIDA:

Jacksonville, *Curtiss* 1345, October, Herb. No. 75299, the plant marked A on this sheet.

Much of what has been referred to *E. TENUIFOLIA* and *E. MINOR* by collectors, apparently belongs to a species that Dr. Greene has described as *E. MICROPHYLLA*. It differs from both of those species in being taller, more robust, and in having narrower heads in a large fastigate corymb. This seems so very distinct from *E. MINOR*, that I feel confident it will be accepted as a valid species, and should it be placed in *Solidago*, it will bear the name *SOLIDAGO MICROPHYLLA* (Greene) Bush, n. comb.

I am referring to it the following:

NORTH CAROLINA:

Clarkton, *Billmore Herbarium* 4632, October 7, 1897, Herb. No. 75286.

FLORIDA:

Apalachicola, collector not given, but apparently *Chapman*, date not given, Herb. No. 790839;

Apalachicola, collector not given, but apparently *Chapman*, date not given, Herb. No. 75284;

Apalachicola, collector not given, but apparently *Chapman*, date not given, Herb. No. 75285;

Braidentown, *Tracy* 7144, November 10, 1900, Herb. No. 75325;

Braidentown, *Tracy* 7144, November 10, 1900, Herb. No. 75326;

Dunedin, *Tracy* 7352, November 3, 1901, Herb. No. 75324;

Lake City, *Rolfs* 314, date not given, Herb. No. 75283;

MISSISSIPPI:

Ocean Springs, *Tracy* 4751, September 13, 1898, Herb. No. 75334.

ALABAMA:

Mobile, *Mohr* 1343, October, November, N. D. Herb. No. 5464.